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**United States
Department of
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Conservation Service

**Resource Economics
and Social Science
Division**

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Number 6

Conservation and Culture:

**The Soil Conservation Service,
Social Science,
and Conservation
on Tribal Lands in the Southwest**

Rebekah C Beatty Davis



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Conservation and Culture:
The Soil Conservation Service, Social Science and
Conservation on Tribal Land in the Southwest, 1934-1994

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Preface

In late September 1995, I had the opportunity to visit some of the American Indian reservations in Arizona which this paper discusses and to meet with some of the people who work on and with the land in those areas. The Navajo Nation is one of the most beautiful places I have seen. From the piñon forests to the Painted Desert, to the red mesas and vast, seemingly endless plains of grass that stretch from horizon to horizon, it is a land of great extremes and great diversity. Canyon de Chelly, one of the most popular tourist destinations in the Nation, is not only an archeological and historic site, but also the home of Navajo families who still farm the once-fertile canyon bottom. The Canyon was the site of one of the Soil Erosion Service's early experiments: in the early 1930's, Spanish olive trees were planted in the canyon bottom to halt to erosion during the regular floods. The olive trees did slow erosion, but they also began to take over the Canyon, overwhelming indigenous plants and trees and encroaching on the Navajo farms. Eventually, the trees performed their job so well that they significantly lowered the water table in the Canyon; this reduced the flood hazard but also made farming and living in the Canyon extremely difficult for the few families that remained.

Today you can take a jeep ride through the Canyon with a Navajo guide and he or she will tell you about the Anasazi ruins and the vibrant pre-historic culture which once dominated the region and then mysteriously disappeared. Your guide may also point out the cliff where Navajo warriors made a last, heroic stand against Spanish troops that sought to remove them from their home in the Canyon. It is only with some prodding, however, that you will

learn about the history of the people who live in the Canyon today, the changes in their lives and land over the past seventy years, their struggle to cope with a changing landscape as well as a transformed society, and their relationship with the foreign forces that shaped both of these things.

I am grateful for the assistance of a number of people in completing this project. First, I would like to thank the U. S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) for supporting this research. The staff at the National Archives, College Park, particularly Joe Schwarz; and the staff at the DC Reference branch of the National Agricultural Library. The staff of the Office of the Executive Secretariat, USDA, and Suzanne Schenckle, American Indian Liaison, NRCS for letting me poke through their files. Special thanks to Steve Charmichael who went above and beyond the call of duty to facilitate my research in Arizona and New Mexico and accompanied me on much of the trip; Jerry Hammond and J. Douglas Helms for supervising and encouraging this research. Jacques Seronde for taking time out of his busy schedule to speak with me on several occasions. The NRCS Staff at the Parker Valley Soil and Water Conservation District (SWCD) and the Navajo Nation for their willingness to discuss their experiences and suggestions for the future. The members of the Navajo Soil and Water Conservation Districts were kind enough to let me participate in their annual meeting at Page, Arizona, where I was able to meet some of the Navajo cooperators as well as the SWCD Board Members, members of the Navajo Tribal Council, and the Manager of the Natural Resources Division of the Navajo Nation. I would like to extend particular thanks to Lavar Bedoni, a Navajo singer, who spoke to me about his farm and his life on the Navajo Reservation, and even tried to get me to dance at the closing dinner. This paper is dedicated to Michael.

Abbreviations

BIA	Bureau of Indian Affairs
NA	National Archives, Washington, DC and College Park, MD.
NAC-HQ	Files of the American Indian Coordinator, Headquarters, Washington, DC
NAC-SW	Files of the American Indian Coordinator, Southwest region, Phoenix, AZ
NRCS	Natural Resources Conservation Service, USDA (formerly SCS)
RG114	Records of the Soil Conservation Service, USDA
RG75	Records of the Bureau of Indian Affairs, USDOI
SCS	Soil Conservation Service, USDA
SES	Soil Erosion Service, USDA (precursor to the SCS)
TC-BIA	Project for Technical Cooperation with the Bureau of Indian Affairs
USDA	U. S. Department of Agriculture
USDOI	U. S. Department of the Interior

During the progressive era, a particular vision of utilitarian land use developed which largely ignored the human component of conservation. The conservationists' assumption that "efficiency"¹ was necessarily the best test of good land use, and was—because of its scientific nature—value-free, proved not only false but violently deficient in the case of the American Indians. The Federal conservationists' attempts at development, which were ignorant of or indifferent to the society and culture of the American Indians, used models based upon an entrepreneurial form of economic organization entirely inappropriate to the predominantly communal societies of the reservations in the Southwest.² This failure to comprehend the basic structure of American Indian societies in the Federal planning process resulted in "substantial social disruption, with only meager economic returns."³

INTRODUCTION

The history of American Indian land use after the imposition of the reservation system is checkered by abuse, overuse, and degradation largely as a result of the policies of the U. S. Government up until the mid 1930s. In 1887, the Government passed the Allotment Act which "broke up the community organization of the tribes as it was frankly intended to

¹ See S. Hays, *Conservation and the Gospel of Efficiency* (Cambridge, MA: Harvard University Press, 1959). This book is an excellent critical introduction to the history of the Federal Government's role in natural resource conservation.

² Lorraine Ruffing, "Navajo Economic Development Subject to Cultural Constraints," *Economic Development and Cultural Change* 24(April 1976): 611. Ruffing argues that "development which minimizes social costs will be a more efficient strategy than one which requires forced cultural change as a precondition for economic development," 612. Ruffing comes to the same conclusion that TC-BIA researchers came to in the late 1930s: that the Navajo resource development should be addressed through the consumption group.

³ Ibid.

do”⁴ while also speeding the alienation of tribal lands and fragmenting Indian land holdings to such a degree that reconstructing contiguous land groups was often impossible later. According to a 1930 hearing on the *Survey of Conditions of Indians in the U. S.*, despite the fact that “In his primitive condition the only use the Indian had for land was as a hunting ground, and hence he knew nothing of land ownership as we understand the term...” American opinion held that “Since some of the eastern tribes had practiced a limited agriculture in a crude way, and a few tribes in the Southwest had even progressed to the extent that they practiced farming under irrigation, it was but natural to look to the land as a source of subsistence for the Indians.”⁵ However, according to the Natural Resources Board’s 1935 study, about two-thirds of the American Indians were “completely landless or own insufficient land on which to make a living on a subsistence level....Many of the tribes have assets which are not in usable form through the checker boarding of the land by sale to white persons....Still others own land rendered practically unproductive through overgrazing, erosion, or destructive logging.”⁶

The U. S. Government, in an attempt to rehabilitate and modernize the ailing economies of the reservations, encouraged farming and stock-raising and provided the basic tools for these pursuits. Ironically, in the Southwest, where American Indians had developed the most advanced indigenous farming techniques, stock-raising rapidly became the main endeavor. As the human population on the reservations expanded, so did the sheep, cattle and goat populations until the limited rangeland was severely overgrazed. In the eyes of the U. S. Government, the depletion of the range reduced the quality of the stock, lowering their market price, and requiring the American Indians to raise more animals to obtain the same eco-

⁴ Department of the Interior, Bureau of Indian Affairs, *Indian Land Tenure, Economic Status and Population Trends; Part X of the Report on Land Planning*, Supplementary Report of the Land Planning Committee, Natural Resources Board (Washington, DC: USGPO, 1935).

⁵ US Senate, Committee on Indian Affairs, *Hearings on the Survey of Conditions of Indians in the U. S.*, Part 6, 2232-2233.

⁶ *Indian Land Tenure...*, 1.

nomic returns, introducing a vicious cycle of environmental depletion and economic depression. The Federal Government's solution was the controversial and ultimately devastating stock reduction program. A large part of the program's failure was due to the Government's inability to understand that the reduction of livestock was not just a technical or economic problem, but was bound up with Navajo social structure, culture, and perceptions of prosperity.⁷

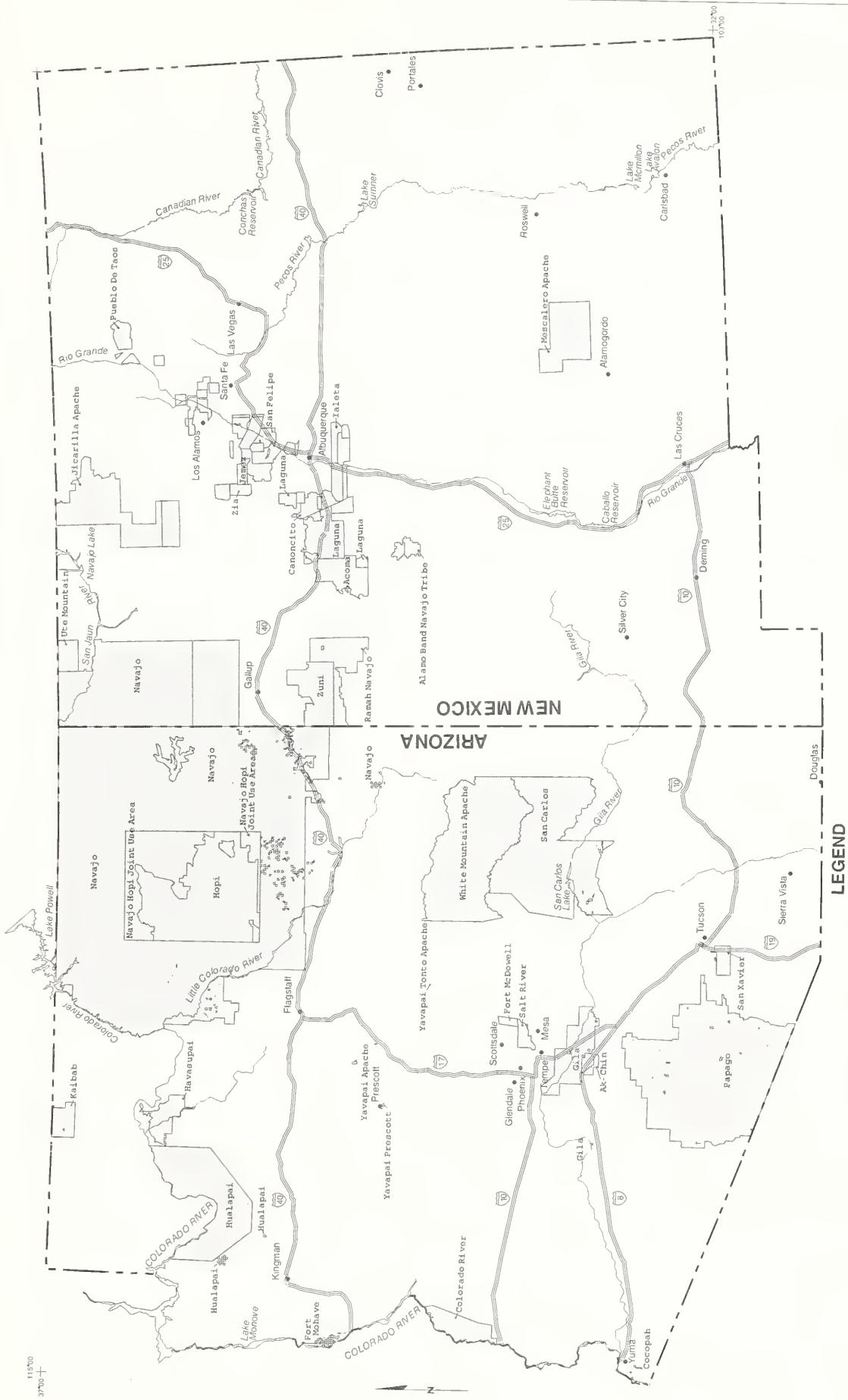
A theory has been advanced, and contradicted, that the increase in stock raising on the Navajo Reservation coincided with a long cycle of climatic change which periodically caused severe erosion and gullying in the arid region. Fossil evidence uncovered in the 1940s and 50s suggested that this erosion cycle, which had begun about 1880, might have been similar to earlier erosion "epicycles".⁸ The most important work on this subject was John Hack's 1942 study which was a part of the Awatovi expedition of the Peabody Museum at Harvard University. Hack believed that without significant climatic change, the vegetative cover in Navajo country would not have been susceptible to overgrazing.⁹ This hypothesis suggested that overgrazing in the early 20th century contributed to the regional erosion problem, but was not, as most of the contemporaneous planners believed, its sole cause.

⁷ Richard White, *The Roots of Dependency: Subsistence, Environment and Social Change Among the Choctaws, Pawnees and Navajo* (Lincoln, NE: University of Nebraska Press, 1983), 236-237. According to White, the Navajo sheep herds were the focus of residential group cooperative efforts and as such represented an important element in community social structure; the herds also represented important resources for food and trade, and were symbols of prosperity. This volume offers an excellent critical discussion of the stock reduction program on the Navajo Reservation and the long-term cultural, economic and social consequences of the program. Alexander Thal also offers an interesting perspective on the BIA's controversial stock reduction program. According to Thal, the BIA's system for assigning and quantifying stock ownership was faulty and resulted in a fundamentally flawed system of grazing permits which persist to the present. Thal, "Navajo Land Tenure," *Southwest Review of Management and Economics* 2, 2(Spring 1982): 175-206.

⁸ White, 229; and W. W. Hill, *Navaho Agriculture and Hunting* (New Haven: Yale University Press, and London: Oxford University Press, 1938), 20.

⁹ John Hack, *The Changing Physical Environment of the Hopi Indians of Arizona*, Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University, Vol. 35, no. 1 (Cambridge, MA: The Museum, 1942).

The erosion on tribal land led to siltation which clogged not only American Indian crop-land, but also threatened White irrigation and hydroelectric projects in the Southwest like Boulder Dam. Though it may be argued that concern for these projects engendered early attempts to solve the reservations' erosion problems, other factors likely took precedence. The crisis in land degradation, swiftly approaching irreversibility as a result of the concurrent over-grazing and climatic change on the reservations, coincided with a growing recognition of the problem that soil erosion presented for the future of American agriculture as a whole and the availability of funds through the various depression-era relief projects to do something about it.



LEGEND

- - - STATE LINE
- - - DIVIDED ROAD
- - - DRAINAGE
- CITY
- I-40 INTERSTATE HIGHWAY
- [Box] INDIAN RESERVATIONS

INDIAN RESERVATIONS IN ARIZONA
AND NEW MEXICO

Source:
USGS 1:2,000,000 DLG data
and Information from NRCS Field personnel.
UTM Projection, Zone 12, NAD27.

100 0 MILES
10,000 10,3200
August 1996 1008205

PART I: 1934-1939

Creation of the SCS and TC-BIA

The election of Franklin D. Roosevelt to the Presidency and a majority of Democratic Senators and Representatives to Congress in 1932 created “conditions more favorable for the enactment of conservation measures regarding Indian lands than had existed at any time previously....”¹⁰ Both the President and John Collier, the newly appointed Commissioner of Indian Affairs, were committed to active conservation and the improvement of the living conditions of the American Indians still living on the reservations. However, the elimination of erosion was not as simple as it might have first appeared. One of the earliest and largest demonstration projects of the nascent Soil Erosion Service was constructed at Mexican Springs on the severely overgrazed and eroded range land of the Navajo Reservation that spanned large parts of Arizona, Utah and New Mexico. The Navajo, Papago and Pueblo Indians in the Southwest all relied upon livestock to varying degrees for their “precarious living”.¹¹ The immediate depredation that reducing the animal stocks would cause seemed a much more real threat to people on the wrong edge of subsistence than the gradual depletion of the range.

¹⁰ Lawrence Kinney, *A Continent Lost—A Civilization Won: Indian Land Tenure in America* (Baltimore: Johns Hopkins Press, 1937), 109.

¹¹ Ibid., 317.

In addition, the combined livestock and agricultural bases of the Navajo economy were “deeply imbedded in Navajo culture.”¹² Thus, when the Soil Erosion Service, and its successor the Soil Conservation Service created in 1935, began work on conserving the reservation land, they found that much more than cattle and sheep stood in the way of their conservation works. The basic assumptions that had functioned in other early soil conservation projects dealing with White farmers ceased to function in the special social and economic conditions of the reservation. The “reorientation of the entire agricultural-economic system of 45,000 Navajo Indians”¹³ was not easily accomplished. Human problems and perceptions, the unsuspecting engineers soon found, were inextricably linked to erosion problems. At the same time, the problems of the American Indians in the Southwest were completely different from any that the Soil Conservation Service had encountered before; in fact, the SCS was largely unsure of just what their problems were. Detailed information on Navajo society, income and subsistence was not available in the early 1930s;¹⁴ even as late as 1971, a Brookings Institute study of American Indians stated that “less socioeconomic information exists about the Indian than about any other minority group in the U. S..”¹⁵

To deal with the newly discovered problem of the American Indians, in 1935 the SCS and the Indian Service established a joint program called Technical Cooperation—Bureau of Indian Affairs (TC-BIA). TC-BIA was originally composed of four staffs: technical, educational, research-compilation, and “social-economic-ethnological” which dealt with the “human problems involved” in soil conservation. The Socio-Economic Survey Section, which enjoyed considerable interchange with the Human Dependency and Economic Survey Unit

¹² White, 236.

¹³ *Summary: Annual Report of the Soil Erosion Service for the fiscal year ending June 30, 1934*, 30.

¹⁴ This information would be provided by the human dependency studies of region 8 discussed in this paper.

¹⁵ Alan L. Sorkin, *American Indians and Federal Aid*, Studies in Social Economics Series (Washington, DC: The Brookings Institution, 1971), 19.

in SCS Region 8 and often used the same title, was organized to study the social and economic conditions and organization of the reservations in order to determine what programs of soil conservation were necessary and appropriate and how best to implement them. By the time TC-BIA was disbanded in 1939, its Socio-Economic Survey team had completed at least 22 studies of American Indian culture, society, and land use in four SCS Regions.¹⁶

In the very early days of its existence, when TC-BIA was known as the Project for Technical Assistance to the Office of Indian Affairs, H. Scudder Mekeel, an employee of the BIA, was acting director of the Socio-Economic Staff. Mekeel stressed a highly pragmatic version of the staff's function, asserting that the primary objective of the project was to produce land-utilization plans appropriate for the reservations. Therefore, it was the task of the socio-economic staff to "outline the best possible use of the reservation's resources, a use which will bring human carrying capacity of the reservations to its maximum, with complete conservation of the reservation's soil resources, and with the maintenance of an adequate standard of living." In order to accomplish this they would need to

determine...the potentialities and limitations of the Indian population on each reservation in terms of its economic system, its own standard of living as well as its economic drives;...[and]to plan the way in which such land utilization plans may be introduced into the reservation social and economic organization so as to strengthen it as well as to foster the life values of the people.¹⁷

However, Mekeel betrayed his promising rhetoric when he suggested in a tentative outline for the research of his division that the staff should undertake "an intensive study of one

¹⁶ Allan Harper, "Report to the Chief of the Soil Conservation Service on the Operation of the Unit, 'Technical Cooperation - Bureau of Indian Affairs', 1935-1939," App. B, transmitted with Allan G. Harper to H. H. Bennett, July 6, 1939; Reports - General (Report to the Chief); TC-BIA General Files 1936-1939; Records of the Soil Conservation Service [RG 114]; National Archives, Washington, DC [NA]. See Appendix A.

¹⁷H. Scudder Mekeel, "SCS Project for Technical Assistance to the Bureau of Indian Affairs, Socio-Economic Division" (n.d.); AO Organization; TC-BIA General Files; RG 114; NA.

Conservation and Culture

reservation community” in order to “obtain an insight into the human possibilities of [the] culture,...” It was an doubtful proposition that one community could provide insight into the conditions and beliefs of all of the others. In all, Mekeel seemed to continuously emphasize the human failure of the American Indians in land degradation, viewing poor land use as a symptom of their culture, rather than their conditions.

Early social studies

Though the SES had employed rural sociologists on some early demonstration project studies, the goals and methods of their work had been quite different from those of social scientists studying the American Indians. The earliest social studies were largely performed by economists and were designed with the limited goal of showing the existing relationship between soil conditions and financial and physical resources of the farmers; population characteristics of the demonstration areas and their association with soil quality; and to establish basic material to be used in education.¹⁸ Essentially, they aimed to show that the farmers who participated in the demonstration erosion control projects enjoyed an improvement in their standard of living over the five-year period of the initial project. Those studies were largely simple attempts to quantify benefits and costs to justify the early demonstration projects.¹⁹ Those studies with even slightly more ambitious goals ran into considerable obstacles. Max White, who was in charge of Economic and Social Studies for SES/SCS, reported in 1934/35 that his attempts to develop a method for finding the relationship between soil erosion and social factors using census data had been largely unsuccessful. White predicted that “the development of a research methodology for this type of study” would be “very difficult and will take considerable time, but the results should be commensurate with

¹⁸ [memo?] Louisiana State University Agricultural Experiment Station, Baton Rouge Louisiana, subject: Economic and Social Study of Soil Erosion Areas....[1934]; 221 Economic Survey May 1934-Sept 1934; Central Records, 1933-1935; RG 114; NA. SES employed T. Lynn Smith as a rural sociologist in these studies of Louisiana.

¹⁹ Untitled report [title page missing], see particularly pages 60-63; 100 Administration and Organization Summaries; Central Records, 1933-1935; RG 114; NA.

the effort.”²⁰ White and his staff were not even attempting to produce comprehensive studies of an essentially foreign culture, but to evaluate changes in the familiar pattern of rural Anglo-American life.

As socio-economic studies had been an important factor missing from the early demonstration projects on the Navajo Reservation,²¹ it was natural that they would be of concern once formal cooperation between SCS and BIA was established. As early as the end of 1935, however, the USDA raised objections to the proposed inclusion of social and economic studies as a part of the TC-BIA program. The Secretary of Agriculture argued that the Indian Service was duplicating the studies, as well as some of the conservation projects for which TC-BIA would be responsible. The Bureau of Indian Affairs (BIA) had conducted a broad survey of Indian reservations in 1933 financed by the Civilian Works Administration (CWA). However, the CWA survey was brought to an abrupt end by the withdrawal of funds in 1934 leaving a number of the surveys incomplete. The studies had been intended to fill a function similar to that of TC-BIA’s Socio-Economic Survey Unit, however, the BIA’s reports tended to be either highly normative and general,²² or compilations of tabular information with no sustained or convincing attempt to explain the data.²³ According to Lawrence Kelly’s article, “Anthropology in the Soil Conservation Service,” Milton Eisenhower also challenged the appropriateness of the human dependency surveys of the Indian population conducted by the TC-BIA, even questioning the legality of their funding through the SCS.²⁴

²⁰ “Progress Report on Economic and Social Studies by Max R. White,” [1934-1935 pre-SCS]; 221 Social and Economic Survey; Central Records, 1933-1935; RG 114; NA.

²¹ For an excellent brief history of the early work on the Navajo Reservation see Lawrence Kelly, “Anthropology in the Soil Conservation Service,” in *The History of Soil and Water Conservation*, Douglas Helms and Susan Flader, editors (Washington, DC: The Agricultural History Society, 1985).

²² See Records of the Bureau of Indian Affairs, Record Group 75; Records Relating to Social and Economic Surveys; NA. Particularly “The CWA Social and Economic Survey of Selected Indian Reservations,” prepared by Vance Rogers for the Indian Land Unit of the Natural Resources Board, October 1934 (released January 1935); NRB Compilation Survey, 1934; Box 1: Blackfeet to Coleville; Records relating to Social and Economic Surveys; RG 75; NA.

²³ See General Survey File; Records relating to Social and Economic Surveys; RG 75; NA. Especially “An outline for making an economic and social study on _____ reservation” (1933?).

²⁴ Kelly, 42.

Collier asserted that the BIA did not have the resources to do justice to either the social research or the conservation projects, and he felt, based on the Navajo experience, that one without the other would be impracticable. He argued, contrary to the USDA, that the “social-economic aspect...is the essence of the soil conservation program....soil conservation is not merely a business of mechanical or botanical operations....It is a business of finding out how the land owners and the populations...can be enabled and persuaded to conserve their soil.”²⁵

Mekeel originally recommended appointing four “anthropological consultants” to perform sociological studies on the reservations. He advocated placing one on each of four reservations which would be selected in order to make a “complete study of the contemporary socio-economic organization for that reservation, so that he would be able to give competent advice to the technical staff upon their arrival.”²⁶ This approach placed more emphasis upon the recommendations of the social scientists than most of the SCS was comfortable with because their findings would constrain the physical studies. Walter Woehlke, the Coordinator of TC-BIA, felt that in order for the socio-economic surveys to be really useful, basic physical surveys had to be completed first.²⁷ The procedure was soon altered so that technical studies were performed first, then sociological studies were made to provide information on how best to implement, refine, and amend the existing technical plans to make them practical in the social and economic environment of the reservation.

²⁵ John Collier, Commissioner of Indian Affairs, Memorandum for Dr. H. H. Bennett, December 20, 1935; AO Organization Correspondence; TC-BIA General Files; RG 114; NA.

²⁶ Memo, Mekeel to Woehlke, January 23, 1936, p. 1; AO Organization Correspondence; TC-BIA General Files; RG 114; NA. Copies of this memo were also sent to Eshref Shevky—indicating his involvement in the early conception of the TC-BIA social studies—Collier, and Calkins.

²⁷ Letter, Woehlke to Collier, February 7, 1936; AO Organization Correspondence; TC-BIA General Files; RG 114; NA. This is enclosed with a set of letters regarding some proposed studies that were beyond the TC-BIA scope and would have required additional WPA funding. The search for a non-Federal institution to do the research so that WPA funding could be obtained seems to be how Provinse first got involved with TC-BIA and the sociological studies, as he was the person mentioned for contact at the University of Arizona by a WPA staffer.

At almost the same time, John Pearmain and Walter Woehlke were attempting to construct a standard outline of work for the Compilation and Research Section of TC-BIA. Their work, although all secondary research, also focused heavily upon economic, social, and ethnological issues. They sought to use the facts gathered by the Bureau of the Census, the BIA's research, and other sources to provide a more holistic picture of American Indian life. Pearmain's detailed plans called for his reports to include information on Native populations and population trends; miscegenation; occupations; understudied economic pursuits like timber, arts and crafts, hunting, and small scale industry; housing and furniture; agricultural development; and tribal social and economic organization including early organization; contemporaneous organization; and attitude toward the Indian Reorganization Act. He also sought to study the "main economic drives as stimulated by their cultural patterns," the "economics of Indian consumption," and their economic attitudes as in their attitude toward wealth and their definition of a "good provider". They also sought to understand the effect of the "impinging economic white world" of traders, economic exploiters, the Indian Service, Missionaries, and the Law.²⁸ It was an ambitious vision, and soon proved impracticable.

After several months of TC-BIA operation, Woehlke wrote to Bennett about the progress of his work. What Woehlke didn't report was the continued reluctance of the regional conservators to support the work of TC-BIA and its Socio-Economic Survey team in their regions.²⁹ Reiterating the project's mission, Woehlke emphasized that the conservation plans for American Indian reservations had to be oriented so that "their application to the reservation resources will conserve the soil, check erosion, and maintain soil fertility with the smallest possible disturbance to the economic and social organization" of the reservations.

²⁸ "Compilation and Research Section - Work Sheet - Tentative Outline," transmitted with, Memo, John Pearmain to Walter Woehlke, January 24, 1936; AO Organization Correspondence; TC-BIA General Files; RG 114; NA.

²⁹ Walter Woehlke to Alida Bowler, October 23, 1936; SE General; TC-BIA General Files; RG 114; NA.

In order to accomplish this last goal, Woehlke asserted that “in almost every instance, the technically perfect plan must be modified so as to make possible its application and execution by the inhabitants of the area.” Those modifications had to be based on “authentic knowledge of the affected population.”³⁰ This authentic knowledge could only be acquired through the type of social studies that had been so objectionable to the USDA.

³⁰ Woehlke to Bennett, March 10, 1936; AO Organization Correspondence; TC-BIA General Files; RG 114; NA.

Developing the human dependency and socio-economic surveys, 1936-1939

In May 1936, the studies of the human population of the Navajo Reservation, which had previously been conducted along with the land management surveys, were reorganized into an independent unit called the Sociological Survey of the Navajo Reservation. According to a 1937 SCS regional report, "...in spite of the scores of volumes of interesting and romantic information on dances, religion, mythology, dress, and general picturesqueness..." of the Navajo, there was an almost complete lack of information about their "real economic life and needs..."³¹ The Sociological Survey was established to collect this basic information. The work of the new unit was "conceived to be a continuous series of dynamic studies related to the work of planning. In the initial stages it will be essentially a survey of human dependency on resources,"³² and primarily economic.³³ The studies were primarily concerned with measuring the level of dependency in such a way that it could be quantified into the planning process. The survey was "predicated on the assumption that the behavior of mankind is susceptible to analysis by a single methodology." The methodology was to focus on social behavior and deal with ethnological concepts only when "relevant to the understanding of a significant contemporary activity." The surveyors were attempting to avoid the type of ethnological research common in the Southwest at the time—which focused on mythology, religion, and arts rather than modern society—and also wanted to address relevant

³¹ USDA, SCS, Region 8, *Navajo District Annual Report, 1936-1937*, Navajo Service (Window Rock, Arizona, June 1937), 61; Files of the Natural Resources Conservation Service American Indian Coordinator—Southwest Region, Arizona State Office, Phoenix, AZ (NAC-SW).

³² *Sociological Survey of the Navajo Reservation: Statement of Procedure*, SCS Region 8, Albuquerque, NM: Regional Bulletin no. 32; Conservation Economics Series no. 5, May 1936.

³³ *Navajo District Annual Report, 1936-1937*, 62.

economic issues, and so chose the term Sociological to represent an interdisciplinary approach to the “single problem of social behaviour.”³⁴

The survey team recognized that “The problem of continuous Navajo livelihood is more complex than a simple sufficiency of resources. If the Navajo are to have a continuous sufficiency of resources, the complex influences to which they are subject must be correctly evaluated.”³⁵ In order to accomplish this, both the external and internal institutional influences on the Navajo economy would be evaluated with particular emphasis on the role of the white trader in the Navajo economy, the consumption group, group obligations, and the division of labor among groups.

The same month that the new survey unit’s *Statement of Procedure* was published, Eshref Shevky³⁶ sent a memorandum to Hugh Calkins, the Regional Conservator for SCS Region 8, headquartered in Albuquerque, New Mexico, suggesting a broad reconnaissance study of the region. This effort would include the type of sociological studies that would become the hallmark of the short-lived Human Dependency Survey Unit of Region 8, as well as heavily influence the sociological work of TC-BIA.³⁷ At the time, Shevky was a part of the SCS Division of Regional Planning. Calkins concern for these specialized studies had begun much earlier, dating back to the problems on the Navajo project,³⁸ and he was receptive to Shevky’s suggestions. Shevky aimed to follow the path he had begun in a BIA study of the Tewa Basin begun in 1935 and later completed and published as an SCS Regional Bulletin.³⁹

³⁴ Ibid., p. 9.

³⁵ Ibid., p. 26.

³⁶ For Shevky’s background see, Don Parman, *Navajos and the New Deal*.

³⁷ Eshref Shevky, “Memorandum for Mr. Calkins on the Subject of a Reconnaissance Study of the South West Region,” May 25, 1936; Rep. Survey; HD-Reports; TC-BIA General Files; RG 114; NA.

³⁸ Calkins to Bennett, November 2, 1934, letter on social and economic studies on the Navajo Reservation; 221 Economic Survey, October 1, 1934; Central Records, 1933-1935; RG 114; NA.

³⁹ Hugh Calkins, *Inventory of Material on the Rio Grande Watershed (An Evaluation of Surveys and Reports): I Tewa Basin Study*. Soil Conservation Service, Region 8; Regional Bulletin no. 34; Conservation Economic Series No. 7; February 1937, 2. The initial survey of the Tewa Basin was made by the BIA’s Indian Research Unit in collaboration with the Forest Service and the SES in 1935. Many of the staff members also participated in the final study completed by TC-BIA in early 1937.

The Tewa Basin Study was the crucible for the development of a number of important ideas about and methodologies for the analysis of the link between culture and environment. According to the study's authors, these were that the "study of land-man relationships" required numerous techniques, rather than a unitary approach toward population or the physical environment; methodologies did not exist at that time to perform the type of complex analysis required; new techniques needed to be designed that would "more adequately serve to define the pertinent facts and to indicate their mutual relevancy."⁴⁰ Schedules and surveys of the traditional kind could not provide the information that these researchers sought. The Tewa Basin Study confronted problems that continue to plague contemporary researchers trying to understand how society and environment interact.⁴¹ As Piers and Blaikie wrote in 1987, "land degradation is *par excellence* an interdisciplinary issue, a comprehensive theory requires the combination of analytical tools of both the natural and social sciences."⁴² They advanced the theory that the human dependency studies suggested but never made explicit, that "damage to the land and damage to certain classes in society are interrelated."⁴³

In 1937, the division of Human Surveys under Shevky's direction, issued an evaluation of prior surveys and reports on the Rio Grande Watershed, the region covered by the Tewa Basin Study. They found its more dynamic approach to studying the American Indian populations more compelling than their original direction. However, they also recognized that the study had "remained largely on the conceptual level. Attempts to objectify the notions of method which were developing were largely unsuccessful."⁴⁴ The study lacked both

⁴⁰ Ibid.

⁴¹For an interesting example of contemporary scholarship relevant to this discussion see Piers Blaikie and Harold Brookfield, *Land Degradation and Society* (London and New York: Methuen, 1987). This book focuses on land degradation in colonial and post-colonial nations of the third world, the parallels between these areas and the situation of American Indians are, not surprisingly, strong.

⁴² Ibid., xix.

⁴³ Ibid., 19.

⁴⁴ *Inventory of Material on the Rio Grande Watershed*, 3.

“developmental organization” and the connection with an administrative agency that would have made it less theoretical and more practical. Without the information or analysis that was necessary to understand land use, and how to achieve land-use adjustment on the reservation, the study failed the SCS’s test of utility.

Despite these shortcomings, the Tewa Basin Study’s proposals for the Santa Cruz Area had some impressive results. The proposals “differed in every essential respect from previous Government efforts in the area. In the first place, the plan recognized that the problems...did not result from the variations in human aptitude...but rather from the deterioration of resources in the area. Therefore the intended reconstruction was regional rather than individual.”⁴⁵ However, the administrative reorganization that occurred shortly after the completion of the proposals precluded implementing them.

Negative racial characterizations of American Indians made the survey’s work even more difficult and even more important to planning for conservation. As the Statement of Procedure pointed out, “Navajo agriculture has often been characterized as ‘primitive’. From the term ‘primitive’ certain value judgments are drawn....This inference has apparently been so pervasive that little information exists on yields of Navajo crops under Navajo techniques of cultivation.”⁴⁶ Without information on native techniques, TC-BIA and SCS suggestions on improving land use would be of little use. Another interesting example is a rare laudatory report of American Indian land use and management in Turtle Mountain, South Dakota. The physical reconnaissance report of the region noted that there was no significant erosion and that the Native farmers were “land conscious husbandmen” despite “tremendous social and economic problems” so severe that they suggested curtailing SCS involvement in the region.

⁴⁵ Ibid., 34.

⁴⁶ *Sociological Study of the Navajo Reservation: Statement of Procedure*, 22.

Conservation and Culture

However, before complementing their farming, the report stressed that the tribe at Turtle Mountain had a lot of French blood among them, suggesting that this European ancestry explained their unusual farming skill.⁴⁷ Interestingly, these assumptions were challenged by a 1937 anthropological study by BIA which suggested that among the Blackfeet Indians, those tribal members with mixed-blood ancestry had a greater propensity than full-blood tribal members to sell-off, misuse, or ignore their land.⁴⁸ Despite the stereotypes of poor or irresponsible Native land use, John Pearmain, one of the last remaining TC-BIA Human Dependency Study Unit members, asserted in a 1939 memo written near the end of the Unit's life that it was "susceptible to proof that white-induced methods, in water development, and lack of method in regulating livestock numbers...are primarily, if indirectly, responsible for...the fact that serious erosion is found throughout the reservation today."⁴⁹

One of the earliest studies of the TC-BIA socio-economic survey unit was a survey of the Sacramento, California Indian Jurisdiction undertaken in 1936. The study made some significant findings about the relationship between the American Indian and White communities. Contrary to what the Government had assumed, it was found that the American Indians in California were rapidly being acculturated rather than assimilated, adapting to "White life and economy" but "Continuing to live on rancherias as separate social groups retaining some of their traditional life." This realization formed the central element around which the survey team attempted to "develop a realistic program of economic and social rehabilitation, dealing with the Indian people as they are and as they want to be."⁵⁰

⁴⁷ "Report of the Regional Office Representative on TC-BIA Reconnaissance surveys of the Crow, Tongue River, Turtle Mountain and Devil's Lake Indian Reservations," (1938/39?); AO - Workplans - Devil's Lake; Chief of Operations, Project for Technical Cooperation with the Bureau of Indian Affairs, Project Records [CO, TC-BIA, Project Records]; RG 114; NA.

⁴⁸ "Report on the Blackfeet Reservation, Montana," October 22, 1937; Blackfeet; Narrative and Statistical Reports; RG 75; NA.

⁴⁹ Memorandum to Allan Harper from John Pearmain, su: reply to request of 4/24/39 for comment on implications of the proposed conservation program for the Papago Indian Reservation Arizona, May 1, 1939; SE General; TC-BIA General Files; RG 114; NA.

⁵⁰ Office of Indian Affairs/TC-BIA, *Human Dependency and Economic Survey, Sacramento, California, Indian Jurisdiction, 1936* (Denver, CO, 1939), I-II.

The Sacramento study argued that although American Indian society, social habits, and psychology, their “past and present cultural position”, were not quantifiable, they were “of equal importance with statistics on income or on land and its utilization...” and were in fact “the main...underlying causes of such statistical reflections of their economic life.”⁵¹ The problem, as TC-BIA defined it, was that the basic resources of the American Indian’s land were incapable of supporting the population. Further depletion and erosion of the already poor land was worsened by “complicated land-ownership patterns, mal-distribution of resources, lack of Indian community organization and incentives, the physical condition of the Indians and the maladjustment of their relations to the social and economic framework of the state in which they are compelled to function.”⁵² Following this assumption, the survey team compiled an extensive history of the reservations in the Sacramento Jurisdiction, including information on the tribal origins of the members of the reservations, their pre-removal relations, and the history of land use and ownership among the tribes and reservations during the Spanish and American periods in the area.

According to the Survey, during the 19th Century many of the American Indians established small farms and orchards. When the gold rush ended, White Californians turned to farming in the State’s fertile valley and “pounced on these Indian homes, filing on the land and ruthlessly driving off the Indian owners. Finally made utterly landless the Indians scattered...”⁵³ The Round Valley Reservation was “established in 1858 as a concentration camp

⁵¹ Ibid., 4.

⁵² “Land-use and Conservation Surveys California Indian Reservations,” [December 1936]; SE General; TC-BIA General Files; RG 114; NA.

⁵³ *Human Dependency Survey, Sacramento...*, 9.

for 8 hostile tribes, placed there that Whites might occupy their lands in peace.” From 1906 to 1927 rancherias, either as miniature reservations or as simple land purchases, were established for the homeless American Indians. The grants of land were “shockingly inadequate....To the philosophic and social compulsion towards incorporation into White communities...was added the most effective and compelling condition of establishing amounts of land which by every standard could not, except in a few cases, support a living.”⁵⁴ According a Resettlement Administration report, only about 5% of the American Indian land had good agricultural, timber or grazing value, and about 10% was fairly productive. The rest of the land, 85%, was desert or valueless. The dire situation “led to privation among the Indians and abuse of the land resources which, in turn,...resulted in...cultivation of...‘sub-marginal land’, overgrazing, erosion, lack of irrigation water or misuse of such water, high relief loads, and poverty among the Indians.”⁵⁵

As a result of their inadequate lands, the American Indians were dependent upon seasonal labor to sustain their livelihood. A system similar to tenant farming in the South developed which approached debt peonage: seasonal laborers would borrow from their employers in the winter to meet their basic needs for food and fuel, the summer months would be spent working to pay off the debt acquired. Despite the problems with the wage-labor system, the surveyors contended that it fit more closely with the rhythms of traditional Indian cultural patterns than did agriculture. However, the depression had led to an influx of white laborers which increased competition for these low paying jobs. The result of this loss in cash income was “chronic under-nourishment and disease and...living at the lowest subsistence level.”⁵⁶ The end recommendations of the Survey suggested a combination of contin-

⁵⁴ Ibid., 12.

⁵⁵ Ibid., 17.

⁵⁶ “T.C.-B.I.A. Land Use Survey - Sacramento Indian Agency,” attached to “Land-use and Conservation Surveys California Indian Reservations,” [December 1936]; SE General; TC-BIA General Files; RG 114; NA.

ued wage work for some and the provision of adequate community-owned agricultural land for those with the desire to learn to farm it, coupled with a harsh prescription for withdrawing Government assistance during the winter, forcing the American Indian to “learn by bitter experience that he must make a greater effort to provide for himself and for the future.”⁵⁷ Though the report tended to be normative and lacked sensitivity to the desires of the Native population, it provided new insights into the life and predicament of the American Indians and the interaction between these things and the condition of the land upon which they lived.⁵⁸

The Human Survey unit also “discovered” a number of important facts about the Navajo. According to Edward Spicer and John Collier, the Human Dependency unit’s studies uncovered a complex Navajo economy combining different levels of dependence upon agriculture, herding, and a combination of the two. The grazing district system imposed to control overgrazing conflicted with traditional land use patterns and aroused hostility and frustration among the Navajo.⁵⁹ Solon T. Kimball and John Provinse, members of Shevky’s cadre, discovered the Navajo Land Use Community, a group of extended family land-use and management units based upon matrilineal ties.⁶⁰ Once identified, this group explained some of the failure of the grazing district system and became the focus of a limited and highly successful experiment in SCS planning on the Navajo reservation. Historically, the land use communities had remained fairly stable geographic units managed by one social group whose major function was the management and use of the resources in the area. The community, “in

⁵⁷ *Human Dependency Survey, Sacramento*, 41.

⁵⁸ For more specific discussions of some of the important findings on American Indians by the Soil Conservation Service’s studies see Lawrence Kelly, “Anthropology in the Soil Conservation Service,” in *The History of Soil and Water Conservation*.

⁵⁹ Spicer and Collier, “Sheepmen and Technicians: A Program of Soil Conservation on the Navajo Indian Reservation,” in *Human Problems and Technological Change: A Casebook*, Spicer, ed. (New York: Russell Sage Foundation, 1952).

⁶⁰ Solon T. Kimball and John Provinse, “Navajo Social Organization in Land Use Planning,” *Applied Anthropology* 1(July-September 1942): 18-25.

its own right...accepted and executed planning for and administration of resources on the area which it claim[ed].” As a result, though the SCS had not recognized it earlier, the “required leadership and responsibility to assume the burden of correct land use practices is already present in the community.”⁶¹ The SCS found that it encountered much less resistance when it addressed the land use problems of the region on a small scale, rather than through the titular reservation leaders and broad, general policies.⁶²

The work of the Human Dependency and Sociological Surveys had some real impact within the SCS, and by 1938, the *Navajo District Annual Report* asserted that there was “a closer realization on the part of the Soil Conservation Service and Indian Service personnel that the land management problem on the Reservation is in significant part a human one.” It was clear that “stock adjustment, agricultural development, and conservation operations” would be impossible without consideration of the people who used and depended on the land, their values, their culture, and their priorities.⁶³

⁶¹ Ibid., 23. The accuracy of this observation is illustrated by the success of the recent programs which allow (and demand) local initiative and planning rather than imposing outside plans for development and use of local resources.

⁶² See Kelly, “Anthropologists and the SCS” for an excellent discussion of John Provinse and his work with the Navajo.

⁶³ USDA, SCS, Region 8, *Navajo District Annual Report, 1937-1938* (Window Rock, AZ, 1938), 59.

The end of the sociological studies

Despite the many contributions of the human dependency and socio-economic studies to the work of the SCS with the American Indian populations, the backlash against the presence of anthropologists and sociologists in the Soil Conservation Service began in earnest in May 1937 with the reorganization of TC-BIA under Allan Harper, its new director. The regionalization of TC-BIA's technical personnel was accompanied by a shift in the emphasis of the sociological studies. Despite the caveats that "In the first year's work...it was found that technically correct erosion control and land use program, in order to be effective, had to be adapted to the ability of the Indian land owners to carry them out..."; that, "In all of the affected regions the discovery of methods of making erosion-control and conservative land-use plans effective on a watershed or community basis was found to be the most difficult part of the total task..."⁶⁴ and despite the stated intent to focus the efforts of TC-BIA on the solution of these problems, the new memorandum of understanding undercut the organization and work of the Socio-Economic Survey unit. The memorandum called for technical teams to come under the jurisdiction of the various regions in which they functioned, but the regional conservators, with few exceptions, were less than eager to have the TC-BIA and its sociological teams invade their territory.⁶⁵ After the regionalization, a series of intensive reconnaissance studies would be performed "in conjunction with agricultural economists and rural sociologists,"⁶⁶ rather than anthropologists, to determine what more detailed studies

⁶⁴ "Memorandum of Understanding Concerning Future Organization and Work Program of Unit for Technical Cooperation - Bureau of Indian Affairs," May 10, 1937, pp. 3-4; AO Organization Correspondence; TC-BIA General Files; RG 114; NA.

⁶⁵ Letter, Walter Woehlke to Alida Bowler, October 23, 1936; SE General; TC-BIA General Files; RG 114; NA.

⁶⁶ Ibid., 3.

should be performed. What this meant was an end to the broad cultural studies that had been envisioned and performed before. The new work would be more pragmatic and narrowly focused upon “the task of preparing erosion-control and conservative land-use plans that can be put into effective operation on the Indian reservations....”⁶⁷ The studies envisioned by Shevky and his compatriots, which were ambitious and admittedly beyond the scope of the SCS work, were no longer welcomed by the SCS, which returned to its earlier utilitarian approach to addressing the social aspects of soil conservation. The anthropologists who had dominated the TC-BIA social and economic studies up to that point were entirely turned over to the Indian Service which was then required to furnish the full-time service of one social anthropologist and one junior agricultural economist, along with various other technical personnel to TC-BIA. The proposed payroll for the Human Dependency and Economic Survey staff for 1938 included six soil conservationists; two agricultural economists; two rural sociologists; one agronomist; two engineering draftsmen; six aides, clerks and typists; and no anthropologists, sociologists, or specialists in American Indian culture or ethnology. The Administrative section, however, did retain a social ethnologist as well as Ruth Underhill as an Assistant Soil Conservationist for Education. The Human Survey Unit of TC-BIA appears to have continued to function in its revised form until July 1939, plagued by criticism from Allan Harper who persisted in his failure to see the value of the unit’s work and who found its methods unorthodox.⁶⁸

⁶⁷ Ibid., emphasis in the original.

⁶⁸ Letter, Allan Harper to Eric Johnson (Assistant Dir., TC-BIA), December 30, 1937, enclosure: Memo from Allan Harper to Human Dependency Unit; AO Filing System; TC-BIA General Files; RG 114; NA.

Although the objectives and form of the human dependency studies of TC-BIA had been remade by the reorganization, the studies continued under Hugh Calkins and Shevky in Region 8 for a short period. Then, at some point in mid- to late-1938, the documentary evidence is poor, the Human Survey Section of Region 8 was subsumed under the Division of Conservation Economics, though Shevky retained the position of director and it appears that the same type of work continued at least for a time. This administrative change may have been due to the continued opposition to the work of sociologists in the SCS.

According to a 1939 memorandum which was TC-BIA's epitaph, the Human Dependency Unit had been "mainly concerned with the problem of making erosion control plans effective and operative by its studies of the degree and kind of economic dependency of the Indian populations on available resources..."⁶⁹ However, the work of the Socio-Economic and Human Dependency studies had done far more than that. They had designed and begun to implement a new means for analyzing the relationship between culture, economics, and land use among the American Indians. Though these qualitative studies were, as many argued at the time, integral to the implementation of successful erosion control projects, they were foreign to the engineer- and physical science-dominated field of soil conservation. This factor combined with limited funds and institutional disregard for the situation of American Indians in a time of national crisis to end the ambitious social research projects established in 1935.

⁶⁹ "Report to the Chief of the Soil Conservation Service on the Operation of the Unit, 'Technical Cooperation - Bureau of Indian Affairs', 1935-1939" n.d.; finding aid file "TC-BIA"; RG 114; NA.

PART II: 1953-1994

The land-use problems of the American Indians persisted long after SCS attention to them had ceased. In 1940, a Presidential reorganization plan transferred all conservation programs on lands under the jurisdiction of the U. S. Department of the Interior (USDOI) to that Department and the SCS projects on tribal lands were handed over to the BIA. However, even before the SCS was formally precluded from working on the reservations, the Conservation District system that SCS had established in 1937, which was organized under state law, had effectively prevented new SCS projects on tribal lands. Over the years, the BIA, who replaced SCS on the reservations, was unable to solve the ongoing problems of land use, subsistence, and economic underdevelopment that plagued the American Indians.

While their land was managed by the BIA, the American Indians had little say in its use and development. As the SCS had in the 1930s, the BIA planned conservation and land use by constructing new organizational systems for decisionmaking on the reservations without consulting the tribal members. Kimball and Provinse's warning in the 1940s had proved prophetic: "The continued stubborn attempts to improve a system of political or social organization without due regard to the traditional behavior and basic principles creating cooperative relations can lead only to failure."⁷⁰ Tribal members were alienated from the planning process and from their land; this alienation led to abuse and neglect of the reservations' natural resources. By the time that SCS programs resumed on the Navajo reservation in the 1970s, visiting SCS employees found badly needed and decades-old irrigation and drainage systems and conservation measures in total disrepair.⁷¹

⁷⁰ Kimball and Provinse, "Navajo Social Organization...," 24.

⁷¹ Telephone interview with Doug Sellers, former Indian Liaison (1984-1989), Soil Conservation Service, Friday, August 25, 1995.

Getting back to work on the reservations

After 1940, a number of significant changes occurred in the relationship between the Federal Government and American Indians. Perhaps most important was the beginning of an active role for the American Indian leadership as advocates for their own interests. No longer content to let the Federal Government or private business interests decide how and when the reservations would be developed, American Indians, particularly the Navajo Nation and other groups in Arizona, began a gradual process of defining their own needs and desires and educating those Federal agencies charged with aiding them about those needs. This new-found strength was formally recognized by a series of Federal legislation giving the American Indians increased autonomy and self-Government, while also guaranteeing protection and assistance through Federal programs in order to ameliorate the poor conditions in which many of the American Indians lived.

Almost 20 years after the end of the TC-BIA experiment, the Lower Colorado River Indian Tribes (CRIT) at Parker, Arizona, organized the first Indian conservation district.⁷² The Parker Valley Soil and Water Conservation District was organized as a regular county district (since it was not yet legal to establish it under tribal code), and was recognized by the

⁷² CRIT has an interesting and unusual history. The irrigation project on the reservation dates back to the 1860s. It was considerably expanded in the 1940s when the Federal Government placed a Japanese-American “relocation” (internment) camp on the Colorado River Indian Reservation. The camp required extensive infrastructural improvements to the reservation, including paving roads and extending drainage and irrigation systems. The improvement work and the camp itself were administered by the BIA. After the Japanese-Americans were freed, the BIA used the newly developed land to settle a number of landless Navajo and Hopi Families on the Reservation. This form of “relocation” bears comparison with the Japanese internment, it is ironic that it required a dentention camp to get the improvements to the reservation’s lands that were so desperately needed. The BIA continued to develop additional land until 1952, eventually improving almost 20,000 acres, half of which was assigned, in 40 acres parcels, to 253 families. The BIA lent farmers equipment to work the land and helped them to form a conservation district association which allowed the BIA to give the farmers the equipment that had been on loan, and also allowed the farmers—as part of a non-profit organization—to purchase military surplus machinery. Initially, the conservation district association supported itself by renting out the earth-moving equipment it had acquired. Interview with Frank Martinez and Jim Crane, Avi, Arizona, CRIT, September 1995. “History and Legal Aspects of the Colorado River Irrigation Project,” (n.d.); file: Colorado River Indian Reservation; NAC-SW.

State of Arizona in 1957. However, according to the existing interpretations of its authority, the SCS was unable to perform conservation activities on the tribal lands, despite their inclusion in a conservation district.⁷³ Beginning around 1970, prompted by the Civil Rights Act, Indian leaders throughout the country began pressing for increased USDA and SCS assistance to the reservations.⁷⁴ In 1975, the Indian Self-Determination Act (PL 94-638) was passed, allowing Indian tribes to adopt standard conservation legislation on their reservations under tribal code. This provided a legal basis for the tribes to establish their own conservation districts. The same year, SCS issued a policy stating that programs available to individuals under PL 74-46, passed April 27, 1935, were available to Indian Reservations, tribal Governments, and tribal members. However, the SCS was still, in practice, prohibited from engaging in work on lands under USDOI jurisdiction. The internal contradictions of SCS policy were obvious.

On July 1, 1977 the USDA Office of General Counsel issued a reinterpretation of the 1940 presidential reorganization⁷⁵ which permitted SCS work on tribal lands situated within the boundaries of a conservation district. On November 28 of the same year, a formal Memorandum of Understanding was signed between the Parker District and the USDA. SCS assistance to the Parker Valley SWCD commenced on August 13, 1978 with the establishment of

⁷³ This was the accepted interpretation, but in fact, in 1953, the Comptroller General Lindsay Warren published an opinion which allowed the SCS to provide assistance on lands under the jurisdiction of the Department of the Interior, provided that the lands were within a conservation district and the Department of the Interior had no objections. See [B-115665], “Comptroller General Warren to the Secretary of Agriculture, October 1, 1953,” *Decisions of the Comptroller General* 33: 133-6. The opinion however, was primarily directed at small areas of Federal land interspersed with private land whose owners were trying to implement conservation practices, not at the larger Indian Reservations which, at least in theory, had conservation programs administered by the BIA. As a result, this reinterpretation had no effect on the actual extension of SCS programs to Indian land and its implications for such work appear to have been ignored. See “Technical Assistance on Indian Lands,” (n.d.) enclosed with letter from Williams to State Conservationists, 3/5/73; Indian Lands (Authority to Work On); NAC-SW.

⁷⁴ “Indian Reservations in Arizona,” (1977); NAC-SW.

⁷⁵ Soil Conservation Service, Office of the General Counsel, Inter-agency Memo #28, July 1, 1977.

the SCS Parker field office.⁷⁶ The following year, Jim Crane and Frank Martinez, the staff at Parker, began a massive cooperative study of the area and drew up an ambitious plan of work, much of which has been implemented. With the assistance and support of Bill Martin, the BIA representative at Parker, farmers were soon approaching the SCS for assistance.

Despite the success of the Parker office and the growing eagerness of other reservations for SCS assistance, it was not until 1980 that the Secretary of Agriculture issued a memorandum extending eligibility for all USDA services to the American Indians on tribal lands.⁷⁷ Between 1980 and 1992 six conservation districts were organized under tribal law, all in Arizona.⁷⁸ However, despite the huge increases in the amount of land serviced by the SCS (in Arizona land eligible for SCS services increased from 22.3 million acres to 42.2 million acres⁷⁹ overnight), and SCS resource inventories which estimated that 80% of all

⁷⁶USDA, Economics, Statistics & Cooperative Service, Forest Service, and Soil Conservation Service, “Plan of Work: Colorado River Indian Reservation River Basin Cooperative Study,” March 1979; Colorado River Indian Reservation (CRIT) file; NAC-SW. The SCS Parker Field Office deserves special mention because of its unique relationship with the SWCD, the BIA and the Reservation. CRIT and the Parker Valley SWCD have a unique history in terms of their multi-tribal orientation, early establishment, and in the particular relationship between the SWCD and the SCS. Since 1978, when SCS and Parker signed their Memorandum of Understanding and the established the first Indian field office, the Parker office has had the same District Conservationist—Jim Crane. Frank Martinez, a member of CRIT and the Parker SWCD Board also came to work for the Parker field office in 1978 and remained there until his recent retirement. Frank’s ties to community, the unusual partnership that Frank and Jim developed with the BIA representative in the area, and Jim’s long-term presence on the reservation allowed them to build up the personal relationships so essential to effective work on the reservations. They also have an intimate knowledge of the political processes as well as the special needs of the reservation. They have been able to implement comprehensive studies of the reservation and aid in the development of long-term development goals. All of these factors combine to make this a uniquely effective office. To my knowledge, this is the only office servicing American Indians that can claim such continuity; in most offices, rapid turn-over and burn-out is the norm. Their dedication and accomplishments are worthy of special mention.

⁷⁷ U. S., USDA, Secretary’s Memo no. 2006, “Conservation Assistance to Indians on Tribal Lands,” January 18, 1980. Though I have been able to find no background information on the Secretary’s decision, I suspect that it was related to the discussions he had with Navajo leaders in late 1979 regarding the inadequacy of USDA service to the Navajo Nation. This is discussed in more detail below.

⁷⁸ “Resolution: Amendments to the NACD bylaws,” August 8, 1992; Navajo folder; files of the Suzanne Schenkle, American Indian Coordinator, NRCS Headquarters, Washington, DC [hereafter NAC-HQ].

⁷⁹ Draft Policy Memorandum on Assistance to Indians and Bureau of Indian Affairs, 5/16/77; NAC-SW.

Indian land needed conservation work, there was no increase in staffing when work began on the Indian lands and the SCS budget was actually decreased in certain years.⁸⁰

Over the decades, the SCS's approach toward conservation in general had changed and despite the limited manpower and funds that SCS could offer, the change meant considerable improvement for the American Indians,. When programs were re-instituted on the tribal lands, they were no longer reservation-wide, long-term, general land use and conservation programs designed by the SCS and imposed upon the tribes. Rather, the SCS focused its efforts, with some exceptions, on specific requests by individual farmers for assistance. This change eliminated many of the planning problems that had plagued SCS work in the 1930s. Since the SCS was responding to requests for aid for specific projects, they generally did not need to be concerned with the appropriateness of the project for the Indian land owner or land user, since it was the farmer who initiated the program. This system also bypassed the problem of to whom the SCS staff needed to address their programs, they no longer needed to discover how land-use communities functioned because it was the land use community itself that requested aid. This approach also had the distinct advantage of returning control over the land to the American Indians themselves.

American Indian cooperators were surprised to find that within the SCS's program, they took control of the management of their own lands, defined their own needs and development priorities, and designed the program of assistance that the SCS would provide through its field offices. This system did, however, cause new problems. Because the projects were farmer-initiated, potential cooperators needed to know what types of assistance were avail-

⁸⁰ "Rural Development Report on SCS Activities and Programs Benefiting American Indians as Requested by Senator Barry Goldwater," October 6, 1983; NAC-SW.

able and how to ask for it. For many of the American Indians, outside of the well-served Navajo Reservation, local SCS offices were inaccessible, both physically and culturally. Besides the unavoidable complications of location and communication, some staff at SCS field offices lacked sensitivity to the needs and interests of the American Indians, maintaining racial stereotypes about the American Indians.⁸¹ At the same time, the extension of SCS services to Indians created competition with white land-users who had been the traditional beneficiaries of SCS assistance and who feared that assistance to Indian land users would reduce their share of the SCS's resources.⁸² This was one reason, aside from their assertion that they were sovereign entities separate from the states, that many tribes insisted on establishing their own conservation districts under tribal code rather than joining existing conservation districts organized under state law.

⁸¹ Doug Sellers interview.

⁸² See Draft Policy Memorandum on Assistance to Indian and Bureau of Indian Affairs, 5/16/77; NAC-SW.

Old and new issues in culture and conservation

The change in SCS's administrative approach to conservation on the reservations did not end the problems of cultural misunderstanding that had complicated its earlier efforts; so in 1988, SCS's National Sociologist organized a workshop in Phoenix, Arizona to address the ongoing cultural problems of SCS projects and administration on American Indian lands in the Southwest.⁸³ The problems and questions that the workshop participants raised were very similar to those addressed in the 1930s. Basic problems continued to include a lack of knowledge among the field personnel of the cultural norms, social behavior, and political organization of the reservations, all of which were necessary to interact with the people living on the reservations, and to design and implement appropriate conservation plans; a failure to understand the self-defined needs of the reservation populations; and a lack of consistently maintained histories of work with the reservation populations, forcing each new employee to begin from scratch, without background information or guidance based on past successes or failures. Forty years after the Human Dependency Surveys, the SCS still did not know what the basic human problems of the reservations were, how to approach conservation among the American Indians, or even how the decisionmaking process on the reservations functioned. One of the ongoing problems cited by several people was a continuing lack of trust and personal relationships between SCS personnel and the reservation population.

⁸³ USDA, SCS, *Working More Effectively with American Indians: Workshop Proceedings, march 7-10, 1988, Phoenix, Arizona* (Washington, DC: USGPO, 1990).

Successful SCS staff were frequently promoted out of field positions, leaving new and often inexperienced field staff to reestablish the network of personal relations that were so important for effective work on the reservation. The conference seemed to suggest that the cultural gulf that had complicated early conservation work had widened rather than narrowed over time.

These issues were stressed in hearings on the 1990 Farm Bill, where American Indian leaders argued that among the most serious barriers to Indian enrollment in the numerous USDA programs for which they were eligible “were the cultural and physical isolation of the American Indian population centers...and a lack of information on Indian affairs by local USDA employees.”⁸⁴ Clearly, cultural and interpersonal issues still reigned among the obstacles to improving the human and physical environment on reservations.

In response to the unmet needs of the American Indian rural populations, the 1990 Farm Bill (FACT Act) required the SCS to provide assistance to any reservation or tribal group that requested it. The assistance was to be in the form of a consolidated USDA office (with ASCS, FmHA, etc.) open at least one day a week on the reservation in office space provided by the local tribal council. The Act resulted in 77 tribes requesting additional assistance from SCS.⁸⁵ Though making the services of the SCS more physically accessible, the Act was a long way from solving the more complex problems of social and cultural accessibility.

The following year, the SCS published the results of an on-going survey of participation in SCS programs by American Indians, both continental and Alaskan. The survey, initiated in 1988 by the Council for Tribal Employment Rights (CTER) and SCS, indicated that

⁸⁴ “Report Language” [draft for report on USDA compliance with 2501(g)]; Folder 2501(g)-Background; NAC-HQ.

⁸⁵See “SCS Activities Sec 2501 (g) 1990 Fact Act” (n.d.); Folder 2501(g); NAC-HQ.

despite the best efforts of the Government, only one-third of the respondents were familiar with SCS programs, and nearly all of those familiar with the programs had participated in them. The main reason given for lack of participation was a lack of information, and 86% of the respondents were interested in receiving training in the USDA programs available to them. The survey put forth a number of recommendations for increasing participation by American Indians. Among these were an information strategy designed specifically for the American Indian communities with “information and assistance which is culturally sensitive and utilizes Indian...communications networks,” and an orientation and training module to educate SCS personnel about American Indians and “to break down any real or artificial barriers to their full participation” in SCS programs.⁸⁶ Clearly, the major obstacles to SCS work on the reservation continued to be problems of communication, sensitivity, and prejudice: problems of culture.

Recognizing this, the SCS initiated a series of conferences in 1991 to raise cultural awareness among SCS employees. The “Harmony Workshops” placed a medium sized group of SCS personnel (50-100) in an experiential learning environment where they were instructed by American Indians in the history and culture of the tribes in their region, in cultural and behavioral norms, in American Indian religion and mythology, particularly as it related to the land, and most important, sensitized to the differences in American Indian and “dominant society” concepts that affected planning and working relationships, like time, future and present, and individual behavior and values. Though the workshops received high praise from most participants, those people most closely involved in ongoing work with the American Indians were more equivocal, reflecting that the workshops were more oriented toward fostering an appreciation for American Indian culture (a worthy goal) than teaching the skills and knowledge necessary to work with the American Indian populations on tribal lands.

⁸⁶USDA, SCS National Bulletin No. 300-1-6, su: LTP-Paticipation of Indians and Alaskan Natives in SCS Programs-Survey Report, March 6, 1991, attachment: report summary, p. 5; Assistance to American Indians; NAC-SW.

The Navajo Nation: a case study⁸⁷

In 1979, members of the Navajo Emergency Services Coordinating Committee approached the Secretary of Agriculture, Bob Bergland, with their concerns that the Navajo Nation was not being adequately served by the USDA. The most pressing needs that they identified were for planning funds to develop a comprehensive land use plan, a USDA office to be located on the Reservation in Window Rock specifically to service the Navajo Nation, and for a liaison who spoke Navajo to work under the direction of the tribal council to educate the Nation about the available programs. At the time, USDA administered all of its programs through county and state offices, both of which had a history of excluding the Navajo from their work.⁸⁸ In order to facilitate the extension of SCS programs to the Nation the Soil Conservation Service entered into an InterGovernmental Personnel Agreement (IPA) with the Navajo Nation. Under the agreement, the SCS assigned Frank Parrill to assist in the formation of conservation districts on the Reservation.

Parrill spent several years working with the Department of Natural Resources of the Navajo Nation, speaking at chapter meetings, holding educational workshops, providing tech-

⁸⁷ This should in no way suggest that the Navajo reservation is representative of all of the diverse conditions on the many different American Indian reservations, groups, rancherias, and other communities across the country. One of the main points of this paper is that there is a wide range of conditions that need to be addressed on a reservation-by-reservation basis, rather than through unitary, global policies. The Navajo Nation has been chosen as the focus of this section for a number of reasons: the scope of this paper prevents addressing a more representative sample of tribal groups; the Navajo Nation, the largest American Indian reservation, is the site of the earliest SCS work with American Indians, and is a good example of the earlier approach of the SCS in the 1930s, exemplifying both failures (the livestock reduction plans) and successes (the Kimball-Provinse research); there is more information readily available on the Navajo Nation's conservation work than on other reservations; The Navajo Nation has been the most active in recent years in reestablishing a relationship with the SCS/NRCS; the Arizona State Office of SCS has been one of the most active in an ongoing relationship with American Indian cooperators on a large scale.

⁸⁸ Chester Yazzie (Chair of the Emergency Services Coordinating Committee, Navajo Nation) to Bob Bergland (Secretary of Agriculture), August 27, 1979, enclosed with Memo, USDA, Office of the Secretary, su: USDA Program on the Navajo Reservation, October 25, 1979; Navajo; NAC-SW.

nical advice and planning services, facilitating the passage of legislation and the formation of conservation districts, and building trust in the community between the SCS and the Navajo people. There was considerable enthusiasm for the programs which Parrill brought to the Reservation. In April 1979, he wrote, “I am continually meeting new people...and it continues to amaze and encourage me at [sic] their concern over their problems and their desire for help in trying to solve these problems.”⁸⁹ At the same time, he encountered many of the same difficulties that his successors would find; as he reported to the State Conservationist, “The motto I have developed after almost one year is: Success comes slowly, and progress takes small steps, but it does happen.”⁹⁰ The decision-making process in the Navajo Nation was completely different, and far more time consuming, than that to which SCS personnel were accustomed. Decisions about planning and land use, and almost everything else, had to be initiated on the local level within the Chapters. Chapter members would reach a concensus, often over several months, and then present their decision to a tribal council representative, or grazing district committee member. There were over 100 chapters on the Reservation, most held their meetings on Sunday evenings, and it was at these meetings that most business was conducted and most local decisions were made, so it was at these Chapter meetings that SCS personnel like Parril, if they wished to be heard, had to make their presentations to the Navajo people. Because of the difficulty in communicating across the reservation—distances between people were great, roads were few and generally poor, telephones were almost unheard of—Parrill had to attend the Navajo chapter meetings regularly. However, going out to the chapter meetings also gave Parrill a unique opportunity to learn about the culture and life of the people with whom he worked. In a monthly report with an unusually philosophical tone, Parrill wrote, “Everyday is a new experience. The ‘old ones’ truly have a deep love for

⁸⁹Parrill to Rockenbaugh, su: Monthly Report - April 1979, 19 April 1979; Navajo—Monthly Narrative Reports April 1979-June 1982; NAC-SW.

⁹⁰Ibid.

'their' land. Through interpreters, I am beginning to know some of their problems, their feelings, and generally their needs and desires. Thank God, thank you and thank the Navajo people for allowing me this opportunity to learn something about living and about the world we live in."⁹¹ Parrill's enthusiasm soon waned somewhat as bureaucratic reorganization within the Navajo Nation stripped the budget and staff for natural resources and provided stumbling blocks to the final referendums on district formation.⁹² Despite these problems, once the bureaucratic upheaval had settled, the process continued to move forward. By January 1981, Parrill reported "everywhere we go and everyone we come in contact with is truly concerned about a conservation program....Although interest, attitude, and concern are not reportable progress items; [sic] they do represent a rewarding type of progress."⁹³ Parrill had succeeded, through long effort, in building the mutual respect and human relationships necessary to function effectively in the Navajo Nation.

The same month that Parrill wrote that optimistic note, the first Navajo conservation district, Little Colorado River SWCD, held its first official Board meeting, signing their memorandum of agreement with the USDA, electing their officers, and becoming the first Indian conservation district organized under tribal law. Little Colorado River was followed the next year by Navajo Mountain, Chinle, and Fort Defiance SWCDs.⁹⁴ The fifth and final district was created in 1983 at Shiprock in the northeast corner of the Reservation, bringing the total amount of land in the Navajo SWCDs to 13,346,675 acres.⁹⁵

⁹¹Memo, Parrill to Rockenbaugh, su: Monthly Report - June 1979, 19 June 1979; Navajo—Monthly Narrative Reports April 1979-June 1982; NAC-SW.

⁹²See esp. Monthly Reports for June and September 1980; Ibid.

⁹³Monthly Report, January 1981, Ibid.

⁹⁴The file "Navajo—Monthly Narrative Reports April 1979-June 1982" in the files of the Southwestern American Indian Coordinator details the process of district formation from Parrill's perspective. An interesting note, in February 1981, Parrill was selected as one of the Navajo Nation Division of Natural Resources 35 outstanding employees.

With the resumption of their work on the reservations, the SCS found that the condition of the natural resource base of the Navajo Nation had improved little from the 1930s to the 1980s. In 1983, there was still an ongoing problem with overgrazing and erosion. Though infrastructure, education, and social services had improved since the 1930s, according to the “summary of proposed realignment of Navajo Nation-USDA relations,” the Navajo Nation continued to face social and economic conditions similar to those during the Great Depression which had facilitated the original SCS work on the reservation. Though the economic base of the Nation had diversified and expanded since the Depression, more than fifty years later Navajos suffered from an unemployment rate of over 60%, more than 60% of homes on the reservation lacked electricity or running water, and erosion continued to ravage the Nation’s land and water resource base.⁹⁵ Despite the five offices and sub-offices SCS established on the Navajo Nation from 1980-1983, long-term planning for the reservation was hampered by problems of coordination between the local field offices and state offices.⁹⁶ However, Navajo tribal commitment to conservation increased exponentially with the introduction of SCS offices on the reservation. Between 1980 and 1983 the Nation’s annual budget for conservation projects increased from less than \$100,000 to \$1.3 million a year. Despite this increase in funding, and perhaps because of the lack of an integrated program to build the infrastructure so desperately needed in the Navajo Nation, conditions only worsened throughout the 1980s.

⁹⁵“History of SCS Assistance to the Navajo Nation”; Navajo—SWCDs—General; NAC-SW.

⁹⁶ “Summary proposed realignment of Navajo Nation-USDA relations,” (n.d.); Arizona folder; NAC-HQ.

⁹⁷ Letter with enclosures from Peter Deswood to Peter Myers, Chief of SCS, October 5, 1983; Arizona Folder; NAC-HQ.

Worsening conditions bred frustrations within the Navajo Nation.⁹⁸ SCS programs, though helpful, appeared inadequate to meet the challenges that the conditions on the Reservation posed. This was partially because the SCS relationship with the Navajo Nation was complicated by a number of factors, most significant among these was the lack of coordination and partnership between the various Federal agencies operating (often at odds) on the Navajo Nation. There were also ongoing difficulties in overcoming the Navajo distrust of Federal programs and a basic lack of information on SCS programs.⁹⁹ At the same time, the needs of the Navajo Nation went far beyond what the SCS was able to provide. Conservation education, fencing, range management, dam construction, and erosion control were ineffective without a comprehensive approach to solving the human problems of the Navajo Nation.

In 1994, a little more than a decade after the first report on Navajo resource use, the Navajo Nation compiled the *Navajo Nation Rural Development 2000 Plan*, an extensive study of conditions on the reservation and an ambitious plan for their improvement.¹⁰⁰ According to the study, things had improved little if at all since the mid-1980s: unemployment rates ranged seasonally from 36% to 50%; average per capita income was \$4106; 56% of the

⁹⁸Letter from Daniel Peaches to Don Gohmert, August 1, 1991; NAC-SW. See also “Report on Assistance to Conservation Districts on the Navajo Reservation,” by Donald Gohmert, State Conservationist Arizona, enclosed with letter from William Richards, chief SCS, to Congressman Daniel Inouye, Chairman, Senate Select Committee on Indian Affairs; NAC-SW.

⁹⁹ For example, even after 14 years servicing the Navajo Reservation, SCS has been unable to effectively communicate the goals and structure of its programs to the Navajo people. Many of the cooperators on the reservation don’t know what types of assistance are offered, don’t understand the self-help aspect of the programs, and have trouble understanding the technical concepts which are necessary to implement conservation practices. This failure, so uncommon outside the Indian communities, points to a continued problem understanding the human component of conservation on the reservation and to the need for a far greater commitment to education, outreach, and training than has existed thus far. Interview with Jerry Thompson, SCS, DC, St. Michaels Field Office, Navajo Nation.

¹⁰⁰ The fate of the *Development 2000 Plan* is illustrative of another obstacle to coordinated, long-term development planning in the Navajo Nation: frequent leadership changes and accompanying purges of the bureaucracy result in discontinuity in policy from one Administration to the next. The current Manager of Natural Resources for the Navajo Nation was unaware of the *Development 2000 Plan*, as were many of the SCS personnel and other people at the annual meeting of the Navajo Conservation Districts.

population lived below the poverty line; three-quarters of the population went without plumbing, kitchens, and/or telephones. The entire reservation had only 18,000 miles of paved road, only three banks, and insufficient local schools, public buildings, and medical facilities. The Navajo Nation's population was living in conditions one normally associates with the poorest nations of the third world, not with late twentieth century America.

The report was important because in it the Navajo performed the type of survey and planning for themselves that TC-BIA had performed in the 1930s. However, because this was a self-diagnosis, it had less of the type of cultural and political bias that complicated early SCS planning and implementation of works on tribal lands, where Federal objectives and priorities were inflicted on the Indian tribes without consideration of their own desires. However, the plan was not free from controversy, due to the diversity of perspectives on development and land use within the Navajo Nation itself. The *Development 2000* plan called for a broad, joint development program by USDA and the Navajo Nation which would provide an integrated approach to addressing the persistent deficiencies in Navajo infrastructure. The SCS and its assistance in improving and managing the potentially rich Navajo natural resource base was the central component. According to the plan, over the previous three years, the Navajo Nation had begun "to develop and institute a *culturally-based*, watershed/ecosystem approach to comprehensive natural resources conservation, restoration and management...working closely with the USDA Soil Conservation Service..."¹⁰¹ The Navajo Nation was by no means asking for a one-sided commitment from the SCS for developing its natural resources. For the fiscal year 1994, the Navajo Nation invested \$7,498,000 in conservation projects. This amount was by far the largest single component of the Nation's budget and almost matched the USDA's \$10,000,000 contributions in this field. Unfortunately, this ambitious project was abandoned as the leadership in the Navajo Nation changed.

¹⁰¹Navajo Nation, *Navajo Nation Rural Development 2000 Plan*, 34. Emphasis added.

Besides the problem of continuity and the need for infrastructural development, there still existed significant cultural barriers to certain conservation practices. Some of this was a result of the clash between several coexistent and conflicting views on land ownership and use: traditional use-right ownership, the private property-based grazing permit system, and tribal common property conventions.¹⁰² The major problem resulting from this clash in recent SCS work on the Nation has been the persistent resistance to fencing in order to manage the severely depleted range in the grazing districts. One of the most typical inter-district disputes has been conflict over grazing permit area boundaries brought on by individual attempts at fencing. Since grazing permits were issued for ill-defined, for overlapping traditional use areas, and often impractical units of land, traditionally, land users cooperated to share the resources of their permit lands. Over time, as perceptions of land use and ownership changed, conflicts over land use intensified. The following is a brief summary of an actual dispute in Grazing District Nine:

District Nine grazing permit holders in the Four Corners region coexisted together for years. Permit holders used adjacent grazing permit areas to take advantage of their special physical features, such as watering holes or salt brush patches...Recently a permittee decided to fence his grazing permit area. This precipitated other permit holders to claim exclusive use of their respective permit areas. Permit holder "B" attempted to deny all other permit holders access to the salt brush patches while permit holder "C" wanted to exclude all others from access to water. (Exclusion from a watering hole is prohibited by tribal law.)¹⁰³

Fencing has been problematic on the reservation since the 1930s, yet the SCS and BIA have continued to press it on the Navajo as the only means of range management. The Navajo

¹⁰² Alexander Thal, "Navajo Land Tenure: Obstacles to Navajo Tribal Resource Development," *Southwest Review of Management and Economics* 2, 2 (Spring 1982): 175-206.

¹⁰³ Ibid., 190.

culture is opposed to the type of land division represented by fencing. The fence, in Navajo society, is a symbol of the exclusion of neighbors, community, and even family that is completely unacceptable to most people. In the past few years, local resistance to fencing has been so intense as to elicit credible death threats against BIA personnel involved in fencing projects. Alternative solutions that would be more culturally acceptable have not been sought.¹⁰⁴ This failure on the part of the SCS is attributable to a continued lack of sensitivity to and awareness of the importance of the Navajo belief system and its relationship to the land. The continued attempts to impose fencing on the reservation have slowed the conservation of the range and increased tensions between SCS and the Navajo.

While range management continues to be a problem on the reservation, other projects have progressed. One example of the integrated projects being developed in the Navajo Nation is a program called Ecosystem Based Assistance (EBA) which adopts a “holistic” approach to planning. One of the pilot programs is the Asaayi Lake area comprising more than 15,000 acres in New Mexico. This project, initiated by the Navajo Nation and Fort Defiance SWCD, required significant emphasis on social and cultural issues. The project offers a possible model for future integrated development projects on the Navajo Nation.

In addition, a growing appreciation for native farming techniques and native plants has had a wider ranging effect than its initiators imagined: the ancient or traditional crops and techniques of the American Indians are proving not only important for revitalizing local agriculture but valuable in attempts to grow better and more hardy plants globally. The Sustainable Native Agriculture Center (SNAC) in Arroyo Hondo, New Mexico was organized,

¹⁰⁴ One alternative to fencing is managed herding, which, though labor intensive, is culturally acceptable to the Navajo. I have not heard any explanations of why this and other alternatives have not been explored, in fact there seems to be little recognition by field personnel that fencing is inappropriate and impractical on the reservation. Some (not all) treat it as a matter of ignorance or backwardness on the part of the Navajo rather than seeking to find other methods of managing the range.

with the help of the SCS, to address the problems of local farmers trying to earn a living on small farms at high altitudes with limited resources, poor soils, and a short, dry growing season. The Director of the Center began collecting American Indian garden seeds in the mid 1980s, eventually collecting nearly 400 varieties of seeds, all of which flourished in the harsh conditions of mountainous New Mexico and Arizona. For example, some varieties of blue corn which are indigenous to Northern Arizona produce dry land crops on only 4 inches of annual rainfall.¹⁰⁵ The seeds had been passed down from farmer to farmer for centuries, along with the knowledge and techniques of how to cultivate them in this difficult environment. The agricultural problems in the Southwest were very similar to those in many famine-ridden third world countries, and the seeds and cultivation techniques have already proved valuable abroad. The center has sent 22 varieties of plants to China, India and Mexico and is involved in research in Zaire, Egypt, Switzerland, and Kuwait.

¹⁰⁵ William Fuller, "Ancient Seeds Reappear," *Soil and Water Conservation News* 11, 3(June 1990): 8-9.

CONCLUSION: WHY CULTURE COUNTS

Though this paper studied only the Southwest, the same problems of cultural misapprehension persist throughout the country.¹⁰⁶ Even as legislation and presidential proclamations changed the legal relationship of the American Indian tribes to the Federal Government and its agencies, increased legal autonomy for the tribes, and mandated access to Federal rural improvement programs, basic cultural and social issues continued to shape the quality and quantity of aid that American Indians received. Nominally physically accessible field offices staffed with personnel with little regard for or knowledge about the American Indian populations they are there to serve are of little use. Conservation programs designed without regard for the beliefs and practices of the human population occupying the land are fruitless at best, and at worst, increase the level of mistrust and misunderstanding that has historically plagued Federal Government-American Indian relations. All of the good intentions of the NRCS and its staff will be for naught if the information they have does not reach the American Indians on the reservations, if the tribal members do not feel comfortable with or capable of approaching the NRCS for assistance, if NRCS programs are not appropriate for the diverse needs of the many American Indian tribes and groups living in the U. S..

While engineers and soil scientists can solve the immediate physical symptoms of poor land use, they cannot diagnose the underlying social, economic, and political causes of

¹⁰⁶ See, for an example of similar problems among non-American Indian groups, the recent article by NRCS's Eklhorn Slough Watershed Project Director Daniel Mountjoy, "Ethnic Diversity and the Patterned Adoption of Soil Conservation in the Strawberry Hills of Monterey, California," *Society and Natural Resources* 9 (1996): 339-357. Dr. Mountjoy's article examines the relationship of ethnic identity and knowledge systems of California strawberry farmers of Anglo, Japanese, and Mexican ethnicity to the use erosion control practices.

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those symptoms. Nor can they design ways to combat those problems in order to overcome the problems of erosion, overgrazing, deforestation, and siltation. These tasks fall to two groups of people, the tribal members on the reservation and social scientists. The task of the former is to take responsibility for the land in their keeping, and be advocates for its improvement and for their own right to Federal assistance. The task of the latter is two fold: 1) to design the tools necessary to educate the American Indians about the resources available to them and how to get them, and to educate the NRCS staff in how better to provide the American Indians with the assistance to which they are entitled; and 2) to aid the tribal members in defining their needs and goals and the NRCS staff members in determining culturally appropriate ways to meet those needs and goals.

Culture, economics, politics, and the environment are inextricably intertwined. Environmental issues cannot be addressed successfully in isolation, but must be treated as a part of the larger complex of human relationships. Recognition of this has led to a gradual acceptance of the role that studies of culture should play in land use planning. This recognition now needs to be translated into a comprehensive effort to implement the results of these studies in the field. The most recent “integrated” development plans by the Navajo Nation exemplify this by addressing the basic social, educational, economic, and infrastructural needs of the Reservation along with its natural resources. The NRCS, if it wishes to serve the American Indian populations of the U. S., must also make a greater effort to comprehend and use the insights that studies of culture and society can provide.



*Appendix A: Human Dependency and Economic Studies Conducted by
TC-BIA, 1935-1939*

Region 7

Human Dependency and Economic Survey, Lower Brule Indian Reservation, South Dakota, 1938. 114 pp. 1938.

Economic Reconnaissance, Pine Ridge Indian Reservation, South Dakota, 1938. 1939

Wind River Reservation, Wyoming

Economy of the Wind River Indian Reservation, Wyoming. 14 pp. 1938.

History and Present Status of Irrigation and Crop Production, Wind River Indian Reservation, Wyoming. 32 pp. 1938.

History and Social Organization of the Indians of the Wind River Reservation, Wyoming. 138 pp. 1938.

Land Tenure and Land Use, Wind River Indian Reservation, Wyoming. 22 pp. 1938.

Livestock Economy of the Wind River Indian Reservation, Wyoming. 44 pp. 1938.

Region 8

Socio-Economic Report on the Gila River (Pima) Indian Reservation, Arizona. 159 pp. 1936.

Preliminary TC-BIA Summary Report, Uintah-Ouray Indian Reservation, Utah. 39 pp. 1937.

Relations of the Papago in Arizona and Sonora, Mexico. August 1937, revised July 1938.

Report on the Supai Reservation, Arizona. 62 pp. 1936

Socio-Economic Report, Walapai Tribe, Truxton Canyon Agency, Arizona. 405 pp. 1936.

Human Dependency Survey, Papago Indian Reservation, Arizona.

Human Dependency Survey, Mescalero Indian Reservation, New Mexico.

Region 9

Preliminary Report, Human Dependency and Economic Surveys, Fort Hall Indian Reservation, Idaho, 1937-1938. 227 pp. 1939.

Region 10

Human Dependency and Economic Survey, Sacramento Indian Jurisdiction, California, 1936. 100 pp. 1939.

Nye County Shoshone Project, Nevada. 70 pp. 1937.

Ruby Valley Purchase Project, Odger Ranch, Land Utilization Study, Nevada. 12 pp. 1937.

South Fork and Ruby Valley Projects for Shoshones of Northeastern, Nevada. 129 pp. 1937.

Survey of the Beatty-Pahrump Area Located in Southwestern Nevada. 26 pp. 1937.

Survey of the Shoshones and Paiutes, Fallon Indian Reservation, Nevada 48 pp. 1937.

Washoe Report for Carson Valley Washoes, Nevada and California. 121 pp. 1937.

Yerington Project for Smith and Mason Valley Paiutes, Lyon County, Nevada. 40 pp. 1937.

Human dependency studies were also conducted by the Human Dependency team in Region 8 under the direction of Eshref Shevky. Many of these studies were issued as Regional Bulletins and part of the Conservation Economics Series beginning in 1935. Following are a list of some of those studies which I was able to obtain. There are many more, most of which deal with populations other than the American Indians.

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Proposals for the Santa Cruz Area. Regional Bulletin no. 28; Conservation Economics Series no. 1; SCS Region 8, Albuquerque, NM, July 1935.

Preliminary Report on Concho. Regional Bulletin no. 29; Conservation Economics Series No. 2; November 1935.

The Importance of Various Types of Income on the Navajo Reservation. Regional Bulletin no. 30; Conservation Economics Series no. 3; January 1936.

Sociological Survey of the Navajo Reservation: Statement of Purpose. Regional Bulletin no. 32; Conservation Economics Series no. 5, May 1936.

Reconnaissance Survey of Human Dependency on Resources in the Rio Grande Watershed. Regional Bulletin no. 33; Conservation Economics Series no. 6, December 1936.

Inventory of Material on the Rio Grande Watershed (An Evaluation of Surveys and Reports); Vol. I: Tewa Basin Study. Regional Bulletin no. 34; Conservation Economics Series no. 7. Volume II: *Section of Conservation Economics;* Regional Bulletin no. 35; Conservation Economics Series no. 8, February 1937.

Appendix B: Suggested Reading for NRCS Field Staff

(These are general works. Full citations may be found in the bibliography.)

- A. T. Andersen, *Nations within a Nation: The American Indian and the Government of the U. S..*
- Council of State Governments, *Indian Rights and Claims: Environmental Management Considerations for the State*, 1977.
- Douglas Hurt, *Indian Agriculture in America: Prehistory to the Present*, 1987.
- Solon Kimball and John Provinse, “Land Use Management: The Navajo Reservation,” in Walter Goldschmidt, ed. *The Uses of Anthropology*, 1979.
- Kimball and Provinse, “Navajo Social Organization in Land Use Planning,” *Applied Anthropology* 1(September 1942): 18-25.
- Lawrence Kinney, *A Continent Lost—A Civilization Won: Indian Land Tenure in America*, 1937.
- Gary Libecap and Ronald Johnson, “Legislating the Commons: The Navajo Tribal Council and the Navajo Range.” *Economic Inquiry* 18 (January 1980): 69-86.
- Marjorie Snodgrass, *Economic Development of American Indians and Eskimos, 1930-1967: A Bibliography*, 1968.
- Edward Spicer, *Human Problems and Technological Change: A Casebook*, 1952.
- Richard White, *The Roots of Dependency: Subsistence, Environment and Social Change Among the Choctaws, Pawnees and Navajo*, 1983.
- USDA, SCS, Frank Clearfield, National Sociologist, *Working More Effectively with American Indian: Workshop Proceedings, march 7-10, 1988, Phoenix, Arizona*, (Washington DC: USGPO, 1990).
- USDA, Office of Information, Office of InterGovernmental Affairs, *Agricultural Programs and Activities for American Indians* (USGPO, 1986).

Appendix C: Suggestions from the Field

- NRCS needs to **recruit more American Indians** to work in the field offices. This might be accomplished through partnerships with local schools and colleges to establish training, educational, internship, and apprenticeship programs to prepare local youth for careers in conservation with NRCS.
- A **follow-up to the seminar on Working More Effectively with American Indians**. A comprehensive survey of the status of NRCS progress on projects with American Indians needs to be undertaken to determine whether the recommendations of the seminar have been implemented, and to what extent they were effective. This could provide a model for future improvements.
- District Conservationists for American Indian reservations need to be carefully selected. One suggestion is to treat the reservations, since they are sovereign entities, as foreign nations in terms of NRCS personnel assignments. If qualified tribal members are not available, District Conservationists and even lower ranked positions might be **recruited through the international division**; assignment to a reservation should be regarded as a special opportunity and challenge rather than as a hardship assignment or a short-term detour on a career path that leads elsewhere. Personnel could be required to undergo a training period before placement on the reservation, during which they would study the language, history and culture of the reservation, just as one would before going to a foreign nation. One DC position might be used as an experiment.
- Because individual relationships established over time are central to effective work on the reservation, there needs to be a career ladder in a single location, and personnel need to have the ability to advance in the field. Current policies force good people to leave the reservations in order to receive promotions. Personnel assignments on the reservations need to be long-term or permanent rather than temporary.
- A **training program** for personnel working with American Indians should be mandatory. The program might have two parts. The first would be a general sensitivity training like the Harmony Workshops. The second part would be reservation-specific and developed in cooperation with each tribe. This would include basic instruction on the Government and decision-making process of each reservation, the social conditions, the behavioral norms, and the specific needs and resources of the reservation or community. Through this training, NRCS personnel would also be instructed in past NRCS work on the reservation and introduced to the members of the community and the tribal Government with whom they need to work. In addition, NRCS should provide **language classes** for NRCS field personnel working primarily with the reservations. This might be arranged with the assistance of the tribal Governments and the Indian CCC.

- NRCS needs to **increase the amount and effectiveness of its outreach** to American Indian communities.
- NRCS field offices working with Indian communities and reservations need to be able to provide **alternative information sources** to the Indian communities. **Videos**, in the language of the reservation, explaining NRCS programs available on the reservations would be of great benefit. For example, on the Navajo Reservation, many of the people do not have electricity, phones or direct mail service, many do not have reliable transportation. Most of their business (mail pickup, phone messages, community meetings) are conducted at the chapter houses. Most of the chapter houses have Satellite dishes, Televisions, and VCRs. If NRCS could provide a video about NRCS programs to each chapter house, the local community could watch it when they wanted to, as often as they wished. This would make information about NRCS program accessible to far more people, particularly to those older people who have difficulty with English.
- In addition to informational videos, **working scale models** of basic conservation works, like catchment systems, would help the field personnel. Small working models would demonstrate the principles behind the technical plans and would help in convincing people to implement their conservation plans.
- NRCS needs to make a **sociologist** available to help the field personnel on the reservations address the social and cultural issues that affect their conservation programs. This position might also take the form of a cultural liaison to each tribe or in each state, this person should be formally and primarily trained in sociology or cultural anthropology as well as knowledgeable in conservation. A program should be developed with the National Sociologist to determine the specific duties of this position.
- Each reservation needs a **staff person for educational and outreach** work. This person should be fluent in the local language and preferably a member of the community. This person would also be responsible for acting as a **coordinator** or liaison between NRCS, the tribal Government, and the various USDA agencies working on the reservation. The salary costs of this position might be shared by the tribal Government.
- Since the conditions on the reservations vary so drastically from the rest of the areas on which NRCS works, the field personnel need to be allowed **greater flexibility** in conservation planning and greater autonomy in decisionmaking in order to determine appropriate local priorities.
- There is a serious lack of **basic information** needed to do conservation on the reservations. Comprehensive **soil maps, resource inventories**, and information on **range sites** needs to be compiled. (Even the Navajo Nation, where NRCS has been most active, lacks these basic elements of conservation planning)

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